

# **ATTACHMENT B**

## **DATA VALIDATION STANDARD OPERATING PROCEDURES**

The following SOPs were used by the Quality Assurance Technical Support Contractor for the validation of analytical data:

SOP QATS-70-077-01	THE DATA VALIDATION OF TRANSMISSION ELECTRON MICROSCOPY (TEM) DATA PACKAGES GENERATED USING ASTM METHOD 5755-95 (Dec. 17, 2002)
SOP QATS-70-078-01	THE DATA VALIDATION OF PHASE CONTRAST MICROSCOPY (PCM) DATA PACKAGES GENERATED USING NIOSH METHOD 7400 (Dec. 17, 2002)
SOP QATS-70-076-01	THE DATA VALIDATION OF TRANSMISSION ELECTRON MICROSCOPY (TEM) DATA PACKAGES GENERATED USING EPA 40 CFR, PART 763, SUBPART E (Dec. 17, 2002)
SOP QATS-70-075-01	THE DATA VALIDATION OF INORGANIC METALS DATA PACKAGES GENERATED USING EPA METHOD 6010B AND EPA METHOD 7471A (Dec. 17, 2002)
SOP QATS-70-074-01	THE DATA VALIDATION OF HRGC/HRMS DATA PACKAGES GENERATED USING EPA METHOD 8290 (Dec. 17, 2002)
SOP QATS-70-073-02	VALIDATING SILICA DATA GENERATED BY METHOD MSD 0700 X-RAY DIFFRACTION (XRD) (Dec. 17, 2002)
SOP QATS-70-071-01	THE DATA VALIDATION OF TRANSMISSION ELECTRON MICROSCOPY (TEM) DATA PACKAGES GENERATED USING ASTM METHOD D 6480-99 (Dec. 17, 2002)
SOP QATS-70-072-01	THE DATA VALIDATION OF POLYNUCLEAR AROMATIC HYDROCARBON (PAH) WIPE SAMPLE DATA PACKAGES GENERATED USING EPA METHOD 8270C (MODIFIED) (Dec. 17, 2002)
SOP QATS-70-070-01	THE DATA VALIDATION OF MAN-MADE VITREOUS FIBERS/MMVF) DATA PACKAGES BY POLARIZED LIGHT MICROSCOPY (PLM) AND SCANNING ELECTRON MICROSCOPY (SEM) GENERATED USING MSD 0310

# **ATTACHMENT C**

## **EMSL ANALYSIS STANDARD OPERATING PROCEDURES**

The following SOPs were used by the contracted laboratory, EMSL for the analysis of Man-Made Vitreous Fibers (MMVF) and Silica:

EMSL MSD 0310 OPERATING PROCEDURE FOR THE ANALYSIS OF MAN-MADE VITREOUS FIBERS FOR THE EPA RESIDENTIAL SAMPLING PROJECT (Feb. 2002, Modified Mar. 2002)

EMSL MSD 0700 OPERATING PROCEDURE FOR THE ANALYSIS OF SILICA (✓-quartz, cristobalite or tridymite) BY X-RAY DIFFRACTION FOR THE EPA RESIDENTIAL SAMPLING PROJECT

# ATTACHMENT D

## SAMPLING AND ANALYTICAL METHODS

1. NIOSH Method 7400: *Asbestos and Other Fibers by PCM*; NIOSH Manual of Analytical Methods; U.S. Department of Health and Human Services, National Institute of Occupational Safety and Health: Washington, DC, 1994.
2. AHERA Asbestos-Containing Materials in Schools. *Code of Federal Regulations*, Part 763, Title 40, 2001.
3. EMSL MSD 0300: *Material Science Division Operating Procedures for Man-Made Vitreous Fiber ID*; EMSL Analytical, Inc., NY, 2001.
4. NIOSH Method 7300: *Elements by ICP*, NIOSH Manual of Analytical Methods; U.S. Department of Health and Human Services, National Institute of Occupational Safety and Health: Washington, DC, 1994.
5. EPA SW-846 6010B: *Inductively Coupled Plasma-Atomic Emission Spectrometry*; Test Methods for Evaluating Solid Wastes Physical/Chemical Methods; U.S. Environmental Protection Agency, Office of Solid Waste: Washington, DC, 1996.
6. NIOSH Method 7500: *Silica, Crystalline, by XRD*; NIOSH Manual of Analytical Methods; U.S. Department of Health and Human Services, National Institute of Occupational Safety and Health: Washington, DC, 1998.
7. ASTM Standard D 5755-95: *Standard Test Method for Microvacuum Sampling and Indirect Analysis of Dust by Transmission Electron Microscopy for Asbestos Structure Number Concentrations*; American Society for Testing and Materials: West Conshohocken, PA, 2001.
8. ASTM Standard E 1973-99: *Standard Practice for Collection of Surface Dust by Air Sampling Pump Vacuum Technique for Subsequent Lead Determination*; American Society for Testing and Materials: West Conshohocken, PA, 2001.
9. ASTM Standard D 6480-99: *Standard Test Method for Wipe Sampling of Surfaces, Indirect Preparation, and Analysis for Asbestos Structure Number Concentration by Transmission Electron Microscopy*; American Society for Testing and Materials: West Conshohocken, PA, 2001.
10. ASTM Standard D 6661-01: *Standard Practice for Field Collection of Organic Compounds from Surfaces Using Wipe Sampling*; American Society for Testing and Materials: West Conshohocken, PA, 2001.

11. EPA SW-846 8290: *Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry (HRGC/HRMS)*; Test Methods for Evaluating Solid Wastes Physical/Chemical Methods; U.S. Environmental Protection Agency, Office of Solid Waste: Washington, DC, 1994.
12. EPA SW-846 8270C: *Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)*; Test Methods for Evaluating Solid Wastes Physical/Chemical Methods; U.S. Environmental Protection Agency, Office of Solid Waste: Washington, DC, 1996.
13. *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*; U.S. Department of Housing and Urban Development: Washington, DC, 1995; *Appendix 13.1: Wipe Sampling for Settled Lead-Contaminated Dust*.
14. NYSDOH Method 198.1: *Polarized-Light Microscope Methods for Identifying and Quantitating Asbestos in Bulk Samples*; New York State Department of Health, Environmental Laboratory Approval Program: Albany, NY, 1997.
15. NYSDOH Method 198.4: *Transmission Electron Microscope Methods for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples*; New York State Department of Health, Environmental Laboratory Approval Program: Albany, NY, 1997.